INTERIM-PLAN FOR PREVENTION OF CONTAMINANT DISPERSION

1) OBJECTIVE

The objective of this Interim-Plan for Prevention of Contaminant Dispersion (IPPCD) is to establish procedural requirements to mitigate potential hazards, on an interim basis, to persons located offsite as a result of contact with emissions resulting from intrusive remedial investigation activities.

2) SCOPE

Procedural requirements identified herein are applicable to certain intrusive actions taken at the 16 Operable Units (UOs) as part of the RFI/RI and IRA activities described in the Inter-Agency Agreement (IAG). Intrusive activities which fall within the scope of this IPPCD are those with the potential for producing appreciable quantities of suspended particulates (AQSP), primarily through mechanical actions. Intrusive activities potentially susceptible to producing AQSP include:

- o Monitoring well and soil/rock borehole installation.
- o Excavations such as trenching or test-pitting using powered equipment.

Additionally, heavy vehicular traffic associated intrusive RFI/RI activities shall be considered as susceptible to producing AQSP. By contrast, activities such as surface soil sampling with hand implements are not considered as susceptible to producing AQSP. Attachment One identifies activities for which Standard Operating Procedures (SOPs) exist that will likely require application of the requirements identified herein. Special consideration shall be given to Interim Remedial Action (IRA) construction-related activities that could require handling large quantities of soil.

Procedural requirements identified herein must be evaluated on a case-by-case basis to determine their potential impact on other IAG objectives. For example, it is possible that applying certain dispersion techniques, such as wetting, could compromise sample integrity and limit the usefulness of the data for which the sampling was intended.

The requirements identified in the IPPCD shall remain in effect until the final PPCD is approved or until modifications are approved and documented in the Site-Specific Health and Safety Plan (SSH&SP).

3) RESPONSIBILITY

The EG&G RFI/RI Project Manager (PM) shall be responsible for assuring that activities conducted at his/her OU are performed in accordance with the requirements identified herein, as well as other relevant procedures including the Environmental Monitoring and Assessment Division Standard Operating Procedures (i.e., the SOPs).

The Remediation Programs Division (RPD) Manager will be responsible for follow-up and auditing of the PM.

4) PROCEDURAL REQUIREMENTS

A pre-startup activity review to evaluate the potential for intrusive actions producing emissions of AQSP containing hazardous substances shall be conducted by the PM and the Activity Field Supervisor. If the activity is being performed by a subcontractor, the subcontractor's Activity Field Supervisor shall participate in the review.

The pre-startup activity review involving intrusive activities where there is significant potential for producing AQSP containing hazardous substances shall be documented by completion of a Radiological/H&S Work Permit (HSP 6.05) and an Excavation Permit (HSP 6.01). HSP's 6.05 and 6.01 are attached.

If the review establishes that there is significant potential for producing AQSP containing hazardous substances, the requirements identified below, as well as relevant SOPs, shall govern the activity.

4.1) SPECIFIC REQUIREMENTS

Activities where there is significant potential for producing AQSP containing hazardous substances shall not be conducted when the following conditions exist:

- Sustained wind speeds above 15 miles per hour (mph) as measured by a site-located anemometer in the case of construction-related excavation, earth moving or other dust generating operations. Sustained winds above 15 mph exist when the 15-minute average wind

speed exceeds 15 mph for two consecutive 15-minute periods.

- Sustained wind speeds above 35 miles per hour (mph) as measured by an anemometer located in the construction yard at the 881 Hillside in the case of drilling and related investigative activities.

- When visible particulate matter emissions are observed originating from the intrusive activity.

- Soils moisture content less that 15 percent (to the extent practicable) on roadways adjacent to the activity area as measured with a Soiltest "Speedy Moisture Tester" or equivalent instrument. Soils can be wetted to increase the moisture content to 15 percent if necessary.

- When Total Suspended Particulate (TSP) concentrations measured in the vicinity of the activity exceed the site-specific trigger levels. Site-specific trigger levels are developed for key occupational contaminants of concern in each Site-Specific Health and Safety Plan. Table 1 and Figure 1 present typical site-specific trigger levels for ^{239}Plutonium.

4.2) ADDITIONAL REQUIREMENTS

- In the special case of excavations, the top 6" of soil will be moved (i.e., scraped) and placed in a low pile and covered with a tarp or other suitable covering to prevent resuspension of particulate.

- In the case of construction-related materials containing potentially hazardous substances such as temporary piles from excavations, actions to prevent the emission of visible particulate matter will be applied as necessary. Such actions may include, but are not limited to, the application of dust suppressants and/or use of covers.

The potential for spreading contamination will be prevented through conscientious decontamination, material handling and monitoring practices. SOPs for these practices are identified as follows:

- SOP 1.3; General Equipment Decontamination

- SOP 1.4; Heavy Equipment Decontamination

- o SOP 1.5; Handling of Purge and Development Water
- o SOP 1.7; Handling of Decontamination Water and Wash Water
- o SOP 1.8; Handling of Drilling Fluids and Cuttings
- o SOP 1.9; Handling of Residual Samples
- o SOP 1.10; Receiving, Labeling and Handling of Waste Containers
- o SOP 1.12; Decontamination Facility Operations
- o SOP 1.13; Containerization, Preserving, Handling, and Shipping of Soil and Water Samples
- o SOP 1.15; Use of Photoionizing and Flame Ionizing Detectors
- o SOP 1.16; Field Radiological Measurements

4.3) AIR QUALITY MONITORING REQUIREMENTS

Air quality monitoring requirements for activities where there is a significant potential for producing appreciable quantities of suspended particulate include the following:

- o Site perimeter and community Radiological Ambient Air Monitoring Program (RAAMP).
- o Local monitoring of Total Suspended Particulate (TSP) at individual activity worksites shall be conducted using a TSI "Piezobalance" Model 3500 Aerosol Mass Monitor, real-time instrument (or equivalent). Local TSP measurements, in conjunction with site-specific trigger levels, will be used to guide the PM's evaluation of the potential hazards associated with activity related emissions.
- o In the special case of earth-moving activities related to Interim Remedial Action (IRA) construction, local TSP monitoring may be augmented with local high volume (Hi-Vol) air sampling. The determination to use Hi-Vol air sampling as well pertinent analysis, sampling duration, and quality control requirements, will be made at the pre-startup activity review.

- Additional worker health and safety monitoring as required by the Site-Specific Health and Safety Plan.

Attachment Two provides additional information on these air monitoring requirements and identifies responsibilities for their implementation under the IPPCD.

Additional requirements that govern activities where there is a significant potential for producing appreciable quantities of suspended particulate include the following:

- Excavated soils that are not promptly backfilled shall be covered with a tarp or similar cover to prevent resuspension of particulate.
- Vehicular traffic will be minimized to the extent practicable.
- Vehicular traffic shall not exceed 5 mph.
- Roadways will be watered as necessary.

Restarting intrusive activities is the responsibility of the PM. Restart will be allowed when the condition that prompted cessation of intrusive activities has been alleviated. For example, if intrusive activities were halted because average wind speeds exceeding 15 miles per hour for two successive 15 minute periods were recorded, then restart can occur when an average of two successive 15 minute periods (i.e. 30 minutes) of less than 15 miles per hour is recorded. Another example is the cessation of intrusive activities resulting from the observation of visible particulate emissions originating from an activity such as vehicular traffic across an access path. In this case, the PM may resume traffic across the area of emissions after preventive actions (such as wetting) have resulted in the elimination of visible particulate emissions. Restart following shutdown as a result of exceeding the site-specific trigger level will not occur until consistent TSP measurements below the trigger level are observed.

Activity-specific requirements will be evaluated periodically to determine their effectiveness at preventing dispersion of contaminants from activities where there is a significant potential for producing appreciable quantities of suspended particulate. Modifications to these requirements will be documented in the Site-Specific Health and Safety Plan.

ATTACHMENT ONE
STANDARD OPERATING PROCEDURES
TO CONSIDER FOR IMPLEMENTATION
OF THE IPPCD

I SOPs for Activities Likely To Be Impacted By the IPPCD

SOP 3.2	Drilling and Sampling Using Hollow-Stem Auger Techniques
SOP 3.3	Isolating Bedrock from Alluvium With Grouted Surface Casing
SOP 3.4	Rotary Drilling and Rock Coring

II SOPs That Affect IPPCD Activities

SOP 1.1	Title To Be Determined
SOP 1.3	General Equipment Decontamination
SOP 1.4	Heavy Equipment Decontamination
SOP 1.5	Handling of Purge and Development Water
SOP 1.6	Handling of Personal Protective Equipment
SOP 1.7	Handling of Decontamination Water and Wash Water
SOP 1.8	Handling of Drilling Fluids and Cuttings
SOP 1.9	Handling of Residual Samples
SOP 1.10	Receiving, Labeling and Handling of Waste Containers
SOP 1.12	Decontamination Facility Operations
SOP 1.13	Containerization, Preserving, Handling, and Shipping of Soil and Water Samples
SOP 1.15	Use of Photoionizing and Flame Ionizing Detectors
SOP 1.16	Field Radiological Measurements

ATTACHMENT TWO
IPPCD AIR MONITORING REQUIREMENTS
RESPONSIBILITIES AND TECHNICAL SUPPORT

I RADIOACTIVE AMBIENT AIR MONITORING PROGRAM (RAAMP)

The RAAMP has been in operation since the early 1970's. It consists of a network of 28 air sampling stations located on the RFP (Onsite Samplers), locations on the RFP perimeter (14 Perimeter locations) and 14 samplers located in the community surrounding the RFP (Community samplers). Laboratory analysis for specific radionuclides is obtained from the samples acquired at these locations. The Colorado Department of Health (CDH) monitors a similar independent network of air samplers at RFP and in adjacent community locations. The scope of the RAAMP is environmental surveillance, reporting, and compliance.

The RAAMP is managed through the Air Programs Group (APG) of the Environmental Monitoring Division (EMAD). EMAD is a division of the RFP Environmental Management Department. The EMAD APG Manager directs the RAAMP Manager in the functioning of the network. The RAAMP Manager is responsible for maintaining the network to ensure compliance with environmental protection requirements contained in DOE Order 5400.1 "General Environmental Protection Program".

Specific responsibilities of the RAAMP Manager that are relevant to the IPPCD include the following:

- Prepare a monthly ambient air report for inclusion in the RFP Monthly Environmental Monitoring Report.
- Schedule weekly air sampler inspection, biweekly air sampler filter collection, required sampler maintenance, air sampler calibrations, and purchase supplies required for RAAMP air sampler operation and sample collection.
- Scheduling the analysis of sample filters and screening analytical results.
- Calculate the air sample volume data with the sampler calibration information.

II LOCAL MONITORING OF TOTAL SUSPENDED PARTICULATE (TSP) AT INDIVIDUAL ACTIVITY SITES

Monitoring of Total Suspended Particulate (TSP) at individual activity sites has become a part of the Environmental Restoration Program at RFP since implementation of the 881 Hillside Phase 1-B

Restoration. At the time of Phase 1-B Restoration, concerns for public safety voiced by CDH, EPA and the public prompted development of a technique for measuring suspended particulate concentration on real-time basis. The technique has been refined slightly in the IPPCD so that Total Suspended Particulate (TSP) is monitored rather than RSP. The technique relies upon measuring suspended particulate matter in the immediate vicinity of the emission source and comparing the measurements with trigger levels developed in each Site-Specific Health and Safety Plan. The trigger level concentration is established to provide protection for workers potentially exposed to hazardous contaminants in soils. This measurement versus criterion approach, in conjunction with other operational constraints (wind speed, soil moisture content, etc.), has been applied successfully at the 881-Hillside Phase 1-B Restoration project.

TSP monitoring (also referred to as "Lo-Vol" air samplers) is the responsibility of the individual Project Manager. The Project Manager can either conduct TSP monitoring himself/herself or delegate the function to the Site Health and Safety Coordinator (SHSC). Normally, the SHSC performs TSP monitoring. The SHSC is assigned by the RFP Safety and Hygiene Department.

Specific responsibilities of the SHSC that are relevant to the IPPCD include the following:

- Instrument calibration and maintenance.
- Performing the TSP monitoring activity.
- Reporting monitoring results to the Project Manager and maintaining required documentation.

Real-time TSP monitoring will be conducted periodically over the duration of activities that have the potential for producing appreciable quantities of suspended particulate matter bearing potentially hazardous substances. Measurements will be conducted at least twice daily. Additionally, emphasis will be placed on obtaining measurements at times when particulate emissions are expected to be greatest (i.e., initiation of intrusive activities, removal of augers, moving of bulk soils, etc.).

III LOCAL HIGH VOLUME AIR MONITORING AT IRA CONSTRUCTION SITES

In cases of earth-moving activities related to IRA construction, the determination to use local Hi-Vol air sampling as well pertinent analysis, sampling duration and quality control requirements will be made at the pre-startup activity review. If the determination to employ local Hi-Vol air sampling is made, a representative from the EMAD APG will be assigned to the PM. APG

monitors meteorology and air quality for the Environmental Management Department. The APG representative will be responsible for operation of the Hi-Vol system establishing any site-specific Hi-Vol monitoring and reporting air monitoring data. Once air monitoring samples have been analyzed and reduced, they will be reported to the PM.

When they are to be employed, Hi-Vol air samplers will be operational and checked before soil moving activities begin. Samplers will be calibrated and deemed operational by the APG. Sample collection frequency, duration and analytical requirements will be established before soil moving activities begin. As a minimum, samples should be collected no less than twice monthly over the period of soil-moving activities.

IV ADDITIONAL WORKER HEALTH AND SAFETY MONITORING REQUIRED BY THE SSH&SP

As required by the IAG and OSHA (29 CRF 1910.120), a Site-Specific Health and Safety Plan is to be developed for each Operable Unit (OU) prior to commencement of activities. Site-Specific Health and Safety Plans are prepared in accordance with the RFP Environmental Restoration Health and Safety Program Plan and Workbook. CDH and EPA have reviewed and commented on the Health and Safety Program Plan and Workbook. Each Site-Specific Health and Safety Plan identifies specific worker health and safety monitoring requirements for the various activities conducted at each OU. When intrusive activities are anticipated, the Site-Specific Health and Safety Plan will identify any additional monitoring requirements in addition to those specified by the IPPCD. Implementation of specific worker health and safety monitoring requirements for the various activities is the responsibility of the SH&SC.